

CLAIMS

What is claimed is:

1. An apparatus comprising:
 - a mask;
 - a pellicle spacer, said pellicle spacer attached to said mask; and
 - an electrostatic pellicle system, said electrostatic pellicle system attached to said pellicle spacer.
2. The apparatus of claim 1 wherein said electrostatic pellicle system comprises:
 - a discharge array;
 - an insulator array attached to said discharge array; and
 - a collection capture array attached to said insulator array.
3. The apparatus of claim 1 wherein said mask has an active area.
4. The apparatus of claim 3 wherein said pellicle spacer does not obstruct exposure radiation incident on said active area.
5. The apparatus of claim 2 wherein said discharge array comprises multiple wires that are connected.
6. The apparatus of claim 5 wherein said multiple wires are laid out as a rectilinear grid.

7. The apparatus of claim 2 wherein said collection capture array comprises multiple wires that are connected.

8. The apparatus of claim 7 wherein said multiple wires are laid out as a rectilinear grid.

9. The apparatus of claim 2 wherein said insulator array provides support and separates said discharge array from said collection capture array only around their peripheral regions.

10. An apparatus comprising:

a mask;

exposure radiation incident on said mask; and

an electrostatic pellicle system disposed between said mask and said exposure radiation.

11. The apparatus of claim 10 wherein said electrostatic pellicle system comprises:

a discharge array; and

a collection capture array parallel to said discharge array.

12. The apparatus of claim 11 wherein said discharge array has been negatively charged.

13. The apparatus of claim 12 wherein said collection capture array has been positively charged.

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14. The apparatus of claim 13 further comprising a power supply.

15. A method of keeping contaminants away from a vicinity of a mask during exposure, said contaminants including an uncharged or neutral particle, a positively-charged particle, or a

negatively-charged particle, comprising:

inducing a positive or negative charge on the uncharged or neutral particle;
attracting the positively-charged particle with a negatively-charged electric field; and
attracting the negatively-charged particle with a positively-charged electric field.

16. The method of claim 15 further comprising reversing polarity of said electric fields over time.

17. The method of claim 16 further comprising purging the vicinity of the mask.

18. The apparatus of claim 17 further comprising transporting contaminants away from the mask.